In the claims:

Claims 1-16 cancelled.

17. (Previously presented) A method of synchronizing at least one or more receivers to a transmitter within a transmission system with the use of a data stream with guard intervals, comprising the steps of inserting with the transmitter a special synchronization train into the data stream at a beginning of a transmission, which train is capable of estimating a chronological position of a signal to be received and/or estimating a center frequency error between the transmitter and the receiver; forming the synchronization train of at least two different symbol sequences which are transmitted in alternation periodically; ascertaining the chronological position of the signal and/or the center frequency error between the transmitter and the receiver from a composite term of various symbol sequences within a predetermined interval; for a block synchronization using total metrics of at least two different symbol sequences used as the synchronization train; and selecting as a beginning of a block, whichever index minimizes the total metrics within the predetermined interval.

18. (Previously presented) A method as defined in claim 17; and further comprising providing in an OFDM transmission symbol the symbol sequences comprising OFDM symbols, which have same lengths as or different lengths from a conventional data symbol.

19. (Previously presented) A method as defined in claim 17; and further comprising transmitting the symbol sequences at least in pairs in each case in alternation.

20. (Previously presented) A method as defined in claim 17, wherein when there are more than two different symbol sequences, further comprising putting at least one symbol sequence as a pair together with a spacing from at least one further pair of another symbol sequence to form the synchronization train.

21. (Previously presented) A method as defined in claim 20; and further comprising providing guard intervals in front of the individual pairs of symbol sequences.

22. (Previously presented) A method as defined in claim 17; and further comprising, for a block synchronization, using total metrics of

at least two different symbol frequencies used as the synchronization train, and as a beginning of a block selecting whichever index minimizes the total metrics within the predetermined interval.

23. (Previously presented) A method as defined in claim 17; and further comprising determining the predetermined interval by a frame structure of the data stream.

24. (Previously presented) A method as defined in claim 17; and further comprising for estimating the center frequency error, ascertaining a phase rotation of two adjacent identical signal segments at a time.

25. (Previously presented) A method as defined in claim 24; and further comprising ascertaining phase rotations of other identical signal portions, and estimating a total center frequency error by averaging via the phase rotations thus obtained.

26. (Previously presented) A method as defined in claim 17; and further comprising utilizing the symbol sequences for channel estimation for a coherent demodulation, in that the symbol sequence after

a frequency correction has been performed is subjected in the receiver to a fast Fourier transformation, and determining amplitudes and phase weights of individual subcarriers.

27. (Previously presented) A method as defined in claim 26; and further comprising estimating channel parameters by averaging various symbol sequences.

28. (Previously presented) A method as defined in claim 17; and further comprising preceding the synchronization train by a preamble which is used to adjust an amplitude control of the receiver.

29. (Currently amended) A transmitter for preparing a synchronization train for at least one receiver within a transmission system with use of a data stream with guard intervals for compensating for multi-path propagation, the transmitter comprising a first device selected from the group consisting of a coding device and a modulating device; and insertion device ~~for~~configured for insertion of a synchronization train, which train is capable of estimating a chronological position of a signal received and/or estimating a center frequency error between the transmitter and a receiver and which train is formed of at least two

different symbol sequences, said insertion device being embodied such that an alternating, periodic insertion of the synchronization train into the data stream prepared by said fist device can be performed; ~~and a~~ memory device operatively connected to said insertion device for various symbol sequences and for their linkage; and means for evaluating the various symbol sequences to gain their metrics and to ascertain the chronological position fo the signal and/or the center frequency error between the transmitter and the receiver, and selecting as a beginning of a block an index for minimizing the total metrics within a predetermined interval in view of block synchronization.

30. (Currently amended) A receiver for receiving and evaluating a synchronization train which can be transmitted by a transmitter within a transmission system with use of a data stream with guard intervals to compensate for multi-path propagation, the receiver comprising a sampling memory for a received data stream; a synchronization evaluation device which is operatively connected to said sampling memory and is ~~suitable~~configured for evaluating a synchronization train ~~including~~which train capable for estimating a chronological position of a signal to be received and/or estimating a center frequency error between a transmitter and the receiver and which train is

formed of at least two different symbol sequences that can be transmitted periodically in alternation with respect to a chronological position and/or a center frequency error within a predetermined interval, and for controlling corresponding reception units for block synchronization, frequency synchronization and/or channel estimation; and means for evaluating the various symbol sequences to gain their metrics and to ascertain the chronological position of the signal and/or the center frequency error between the transmitter and the receiver, and selecting as a beginning of a block an index for minimizing the total metrics within a predetermined interval in view of block synchronization.

31. (currently amended) A communication system using the method of ~~claim 17 and~~ synchronizing at least one or more receivers to a transmitter within a transmission system with the use of a data stream with guard intervals, comprising the steps of inserting with the transmitter a special synchronization train into the data stream at a beginning of a transmission, which train is capable of estimating a chronological position of a signal to be received and/or estimating a center frequency error between the transmitter and the receiver; forming the synchronization train of at least two different sequences which are transmitted in alternation periodically; ascertaining the chronological position of the signal and/or the

center frequency error between the transmitter and the receiver from a composite term of various symbol sequences within a predetermined interval; for a block synchronization using total metrics of at least two different symbol sequences used as the synchronization train; and selecting as a beginning of a block, whichever index minimizes the total metrics within the predetermined interval and embodied as a radio communication system, a line-connected communication system, or a hybrid communication system with radio components, optical waveguide components and/or line-connected components, said communication system including one transmitter and one receiver assigned to subscribers, with variable transmission and reception modes.

32. (currently amended) A communication system ~~using~~comprising the transmitter of claim 29 or the receiver of claim 30 and embodied as a radio communication system, a line-connected communication system, or a hybrid communication system with radio components, optical waveguide components and/or line-connected components, said communication system including one transmitter and one receiver assigned to subscribers, with variable transmission and reception modes.

33. (currently amended) A broadcasting communication system using the method of ~~claim 17 and~~ synchronizing at least one or more receivers to a transmitter within a transmission system with the use of a data stream with guard intervals, comprising the steps of inserting with the transmitter a special synchronization train into the data stream at a beginning of a transmission, which train is capable of estimating a chronological position of a signal to be received and/or estimating a center frequency error between the transmitter and the receiver; forming the synchronization train of at least two different symbol sequences which are transmitted in alternation periodically; ascertaining the chronological position of the signal and/or the center frequency error between the transmitter and the receiver from a composite term of various symbol sequences within a predetermined interval; for a block synchronization using total metrics of at least two different symbol sequences used as the synchronization train; and selecting as a beginning of a block, whichever index minimizes the total metrics within the predetermined interval and embodied as a radio communication system, a line-connected communication system, or a hybrid communication system with radio components, optical waveguide components and/or line-connected components, said broadcast communication system being formed so that an association of a transmission and a reception mode is finally specified.

34. (currently amended) A broadcasting communication system ~~using~~comprising the transmitter of claim 29 or the receiver of claim 30 and embodied as a radio communication system, a line-connected communication system, or a hybrid communication system with radio components, optical waveguide components and/or line-connected components, said broadcast communication system being formed so that an association of a transmission and a reception mode is finally specified.